AUTHOR INDEX*

Volumes 27 to 34—1963 to 1970

Adelberg, Edward A., **29:**161
Ajello, Libero, **31:**6
Ajl, Samuel, J., **30:**177; **32:**1
Alexopoulos, Constantine J., **34:**126
Alford, C. A., Jr., **28:**444
Allen, Milton J., **30:**80
Ambrose, Charles T., **30:**408
Anacker, R. L., **27:**352
Andrewes, C. H., **29:**1
Angus, T. A., **29:**364
Artenstein, Malcolm S., **30:**571
August, J. T., **30:**279

Balassa, G., **27:**228
Barksdale, Lane, **34:**378
Baron, L. S., **32:**362
Bartlema, H. C., **30:**633
Bartnicki-García, S., **27:**293
Beckwith, Jonathan R., **34:**222
Bejuki, Walter M., **29:**546
Bell, J. F., **27:**341
Bellanti, J. A., **30:**539
Bergman, K., **33:**99
Bergman, R. K., **32:**103
Bonventre, Peter F., **31:**95
Bott, Kenneth F., **32:**370
Boxaca, Martha, **31:**145
Brachman, Philip S., **30:**646
Bradley, David E., **31:**230
Braun, Werner, **31:**83; **32:**291
Brock, T. D., **32:**139
Broda, Paul, **32:**206
Brown, A. D., **28:**296
Brygoo, P. R., **29:**506
Buescher, E. L., **30:**539
Burke, Patricia V., **32:**99

Campbell, L. Leon, **29:**359; **30:**732
Canale-Parola, E., **34:**82
Canchola, J. G., **29:**496
Carlisle, Harold N., **30:**636
Castenholz, Richard W., **33:**476
Cate, Thomas R., **30:**517
Cebra, John J., **33:**159
Cerdá-Olmedo, E., **33:**99
Chanock, Robert M., **29:**185, 487, 496
Chappell, W. Adrian, **30:**615
Charamella, Leigh J., **32:**320
Cheever, F. S., **28:**400
Cherry, W. B., **29:**222
Christmas, E. E., **29:**496
Cirillo, Vincent P., **30:**68
Cole, Roger M., **29:**326
Conrad, G. Miles, **29:**523
Converse, John L., **30:**678
Coons, A. H., **28:**397
Copeland, James C., **32:**302
Couch, Robert B., **30:**517, 576, 586
Cramblett, H. G., **28:**431
Crandall, M. A., **32:**139
Crozier, Dan, **30:**542
Curtiss, Roy, III, **32:**320

Dalldorf, Frederic G., **30:**646
Dangerfield, Harry G. **30:**542
Dannenberg, Arthur M., Jr., **29:**466; **32:**85
Darnell, James E., Jr., **32:**262
Datta, Naomi, **32:**55
David, C. N., **33:**99
Davies, Julian, **32:**493
Dawes, E. A., **28:**126
Dawson, Roy C., **29:**251
Deibel, R. H., **28:**330
Deinema, Maria H., **31:**194
Delbrück, M., **33:**99
De Ley, J., **28:**164
Demain, Arnold L., **34:**1
Demchak, Peter, **30:**615
Dennison, D. S., **33:**99
Derrenbacher, Edward B., **30:**576
Dick, R. G., **29:**560
Dimmick, R. L., **30:**597
Dingle, J. H., **28:**439
Doetsch, R. N., **28:**87
Dominik, Joseph W., **30:**615
Douglas, R. Gordon, Jr., **30:**517, 576, 586
Dowling, Harry F., **30:**485
Duckworth, Donna Hardy, **34:**344
Durachta, C. W., **29:**560
Dutton, Richard W., **30:**397

Edelman, Marvin, **31:**315
Edlin, Gordon, **32:**206
Ehrlich, Richard, **30:**604, 624
Eigelsbach, Henry T., **30:**532
Eisen, Herman N., **30:**383
Ellis, J. J., **30:**795
Epstein, H. T., **31:**315; **32:**313
Erickson, Robert J., **32:**291
Erikson, R. L., **30:**267

Feldman, H. A., **28:**440
Felsenfeld, O., **28:**72; **29:**46

* Cumulative author and subject indexes to volumes 23–26 were published in the December 1962 issue.

Firshein, William, **31**:83
Fitz-James, Philip C., **29**:293
Foster, E. M., **34**:217
Foster, K. W., **33**:99
Franklin, R. M., **30**:267
Friedman, S. Marvin, **32**:27
Fuhs, G. Wolfgang, **29**:277
Fukushi, K., **27**:352
Furcolow, Michael L., **30**:694

Gay, Clive C., **29**:75
Gebhardt, Louis P., **31**:65
Gemski, P., Jr., **32**:362
Gerhardt, Philipp, **33**:1
Gerone, Peter J., **30**:517, 576, 586
Ghuysen, Jean-Marie, **32**:425
Gibson, Frank, **32**:465
Gilardi, Gerald L., **29**:406
Glassman, Harold N., **30**:657, 696
Gochenour, William S., Jr., **30**:584, 595
Goldstein, Elliot, **30**:488
Goodell, E. W., **33**:99
Gorelick, Arthur N., **30**:644
Gorini, L., **27**:182
Gray, Mitchell L., **30**:309
Green, Gareth M., **30**:488
Guilbault, George G., **30**:94
Gusdon, John P., Jr., **30**:418
Gwaltney, J. M., Jr., **28**:409
Gwinn, Darrel D., **32**:297

Hamilton-Miller, J. M. T., **30**:769
Hanks, John H., **30**:114
Harold, Franklin M., **30**:772
Harshbarger, John C., **29**:397
Haskins, F. A., **28**:181
Haskins, W. T., **27**:352
Hatch, M. T., **30**:597
Hayaishi, Osamu, **30**:720
Hayflick, Leonard, **29**:185
Hearn, Henry J., Jr., **30**:615
Hedén, C.-G., **28**:14
Heimpel, A. M., **29**:397
Heisenberg, M., **33**:99
Hesseltine, C. W., **30**:795
Hiatt, C. W., **28**:150
Ho, M., **28**:367
Hogge, Arthur L., **30**:542
Hohn, B., **33**:172
Holland, J. J., **28**:3
Holloway, B. W., **33**:419
Holt, S. C., **33**:346
Hopwood, David A., **31**:373
Hornick, Richard B., **30**:532
Housewright, Riley D., **30**:696; **31**:3
Hsiung, G. D., **29**:477; **32**:185
Hsu, Yu-Chih, **32**:387
Hummeler, K., **27**:381

Iino, T., **33**:454
Ikawa, Miyoshi, **31**:54
Inamine, Edward, **34**:1

Jackson, G. G., **28**:423
Jeffries, B. C., **29**:487, 496
Jenkin, C. R., **27**:391
Johnson, E. M., **32**:362
Joklik, Wolfgang K., **30**:33
Jones, Dorothy, **34**:40
Jordan, W. S., Jr., **28**:409

Kadis, Solomon, **30**:177
Kaplan, N. O., **27**:155
Kass, Edward H., **30**:488
Kaufmann, Arnold F., **30**:646
Keefer, Garrett V., **30**:576
Kersters, K., **28**:164
Kibrick, S., **28**:452
Kilbourne, Edwin D., **30**:530
Killinger, Arden H., **30**:309
Kim, H. W., **29**:487, 496
Kleinschmidt, W. J., **31**:132
Knight, Vernon, **30**:496, 517, 576, 586
Kong, Yi-Chi M., **31**:35
Kooistra, John A., Jr., **29**:577
Krause, R. M., **27**:369
Kull, Frederick C., **29**:534
Kunin, C. M., **28**:382
Kushner, D. J., **33**:302
Kuyama, S., **27**:282

Lamanna, Carl, **31**:95
Landy, M., **27**:352
Langmuir, Alexander D., **30**:672
Lanni, Yvonne Thery, **32**:227
Lark, Karl G., **30**:3
Larson, C. L., **27**:341
Lawton, William D., **32**:297
Leadbetter, E. R., **33**:346
Legator, Marvin, **30**:471
Leif, Walter R., **30**:602
Leifson, Einar, **30**:257
Lemon, H. M., **28**:490
Lengyel, Peter, **33**:264
Lepper, Mark H., **30**:548
Lerner, A. M., **28**:391
Levine, H. B., **31**:35
Lewis, Kenneth, **30**:101
Lidwell, O. M., **30**:573
Lincoln, Ralph E., **31**:95
Lindberg, Donald A. B., **29**:554
List, R. H., **27**:341
Lüderitz, O., **30**:192
Luria, S. E., **32**:401
Lurie, Max B., **29**:466
Lwoff, André, **33**:390

XUM

McCalla, T. M., **28:**181
McCarthy, Brian J., **31:**215
MacLeod, Robert A., **29:**9
Magis, Josephine M., **30:**624
Mahy, B. W. J., **31:**110
Malmgren, B., **27:**352
Marmur, Julius, **32:**302
Martin, C. M., **28:**480
Marvin, D. A., **33:**172
Matumoto, Minoru, **30:**152; **33:**404
Maxfield, Myles, **30:**557
May, K. R., **30:**559
Mays, Jane Ann, **32:**320
Meissner, G., **33:**99
Merigan, Thomas C., **31:**138
Meynell, Elinor, **32:**55
Meynell, G. G. **32:**55
Miller, William S., **30:**571, 589
Milner, K. C., **27:**352
Mims, C. A., **28:**30; **30:**739
Montie, Thomas C., **30:**177
Moody, M. D., **29:**222
Munoz, J., **32:**103
Munoz, J. J., **27:**325
Murphy, E. B., **31:**132
Murray, R., **28:**493
Muschel, Louis H., **30:**427

Neidhardt, Frederick C., **30:**701
Neuhard, Jan, **34:**278
Neva, F. A., **28:**444
Nickerson, W. J., **27:**305
Niederpruem, Donald J., **33:**505
Nomura, Masayasu, **34:**228
Notkins, Abner L., **29:**143
Novick, Richard P., **33:**210
Nowotny, A., **33:**72

O'Donovan, Gerard A., **34:**278
O'Hara, Mary B., **29:**544
Orsi, E. V., **28:**402

Paine, T. F., Jr., **28:**472
Pappagianis, Demosthenes, **31:**25
Parrott, R. H., **29:**487, 496
Paucker, Kurt, **31:**145
Pène, Jacques J., **32:**379
Perkins, H. R., **27:**18
Pike, Robert M., **31:**157
Pittard, James, **29:**161; **32:**465
Plagemann, Peter G. W., **30:**288
Poindexter, J. S., **28:**231
Porter, J. R., **28:**211
Postgate, John R., **29:**359, 425; **30:**732
Pramer, D., **27:**282; **29:**382
Proctor, Donald F., **30:**498

Rabin, Robert **32:**1
Reed, Raymond E., **30:**678
Reeves, Henry C., **32:**1
Reeves, Peter, **29:**25
Rhodes, Muriel E., **29:**442
Rhodes, R. A., **29:**373
Ribbons, D. W., **28:**126
Ribi, E., **27:**341, 352
Rogers, H. J., **34:**194
Romig, W. R., **32:**349
Rosen, Leon, **29:**173
Rowley, D., **27:**391
Rowson, K. E. K., **31:**110
Rylander, Ragnar, **30:**514
Ryter, Antoinette, **32:**39

Sanderson, Kenneth E., **31:**354; **34:**176
Sanwal, B. D., **34:**20
Sarles, William B., **31:**175
Saslaw, Samuel, **30:**636
Sawyer, William D., **30:**542
Schaeffer, M., **28:**402
Schaeffer, P., **33:**48
Schäfer, W., **27:**1
Schenk, C. E., **29:**560
Schiff, Jerome A., **31:**315
Schlessinger, David, **33:**445
Schultz, Jerome S., **33:**1
Scott, T. F., McN., **28:**458
Seelig, Mildred S., **30:**442
Shapiro, Lucille, **30:**279
Shaw, Norman, **34:**365
Shilo, Moshe, **31:**180
Shockman, Gerald D., **29:**345
Shortley, George, **29:**102
Shotwell, O. L., **30:**795
Shropshire, W., Jr., **33:**99
Sidwell, Robert W., **31:**65
Smith, H., **32:**164
Smith, P. F., **28:**97
Sneath, P. H. A., **34:**40
Snow, G. A., **34:**99
Söll, Dieter, **33:**264
Spector, W. G., **27:**117
Spencer, J. F. T., **31:**194
Springer, G. F., **27:**191
Stadtman, E. R., **27:**170
Stallions, Donald R., **32:**320
Starkey, R. L., **27:**243; **30:**67
Staub, A. M., **30:**192
Stavitsky, Abram B., **30:**418
Steiner, Lisa A., **30:**383
Steinhaus, Edward A., **29:**388
Stodola, Frank H., **31:**194
Storck, Roger, **34:**126
Strasters, K. C., **30:**674
Stubblefield, R. D., **30:**795

Sturtevant, F. M., **29:**560
Sulitzeanu, D., **32:**404
Swim, H. Earle, **30:**288
Swinton, David, **31:**315

Taylor, Austin L., **31:**332; **34:**155
Thornberry, H. H., **29:**516
Thorne, Curtis B., **32:**358
Thrope, Bert D., **31:**65
Tokumaru, T., **28:**458
Trotter, Carol D., **31:**332

Valentine, R. C., **28:**497
Van Iterson, Woutera **29:**299
Vargosko, A. J., **29:**487, 496
Vernon, Leo P., **32:**243

Wagner, R. R., **27:**72
Watanabe, T., **27:**87
Watson, Dennis W., **33:**383
Wegener, Warner S., **32:**1
Weinberg, Eugene D., **30:**136
Weisblum, Bernard, **32:**493
Weller, T. H., **28:**444
Wentworth, B. B., **27:**253
Wessels, Joseph G. H., **33:**505
Westphal, O., **30:**192
Wicht, W. C., **27:**341
Widelock, D., **28:**402
Wilkins, Judd R., **29:**102
Williams, R. E. O., **27:**56; **30:**660
Willoughby, D. A., **27:**117
Wilson, Benjamin J., **30:**478
Wilson, Gary A., **32:**370
Wilson, P. W., **27:**405
Winkler, K. C., **30:**622, 674
Wogan, Gerald N., **30:**460
Wohlhieter, J. A., **32:**362
Wong, D., **29:**487
Woodson, Bruce, **32:**127
Wright, B., **27:**273
Wyss, Orville, **29:**269

Yamashiroya, Herbert M., **30:**624

Zalokar, M., **33:**99
Zeldin, Bernice, **31:**315
Zentner, Robert J., **30:**551

XUM

SUBJECT INDEX*

Volumes 27 to 34—1963 to 1970

Acetic acid bacteria
—flagellation of, **29**:442
—oxidation of glycols by, **28**:164
α-Acetolactate
—formation in *A. aerogenes*, **27**:170
Acids
—*see* Amino, Deoxyribonucleic, Diaminopimelic, Muramic, Silicic, Tannic, Teichoic
Actinomycetales
—in major bacterial grouping, **34**:40
—phosphatides of, **31**:54
Actinomycetes
—sporulation and production of antibiotics, exoenzymes, and exotoxins, **33**:48
Actinomycin D
—effect on virus replication, **30**:152
—inhibition of antibody synthesis by, **30**:408, 418
"Active ribosomes"
—properties, **33**:445
Acridines
—effect on drug resistance of cells, **27**:87
Acylases
—role in microbial economy, **30**:769
Acylated sugar derivatives
—of glycolipids, **34**:365
Adenovirus
—infection of infants and children, **29**:487
—respiratory disease from, **30**:517
Adenoviruses, **29**:1
Aerobacter
—bacteriophages, **31**:230
Aerobacter aerogenes
—fate of glycogen in, **28**:126
—glycol dehydrogenases of, **27**:155
—polyphosphate utilization by, **30**:772
Aerobic spore-forming bacteria
—comparative ultrastructure, **33**:346
Aerocins, **29**:24
Aeromonas
—flagellation of, **29**:442
Aerosol
—infection with *Rickettsia rickettsii*, **30**:636
—vaccination with tetanus toxoid, **30**:624
Aerosolization
—stresses of, **30**:551
Aerosols
—viral, **30**:576
Aflatoxins
—nature of, **30**:460, 471
—production, **30**:795
Age
—effect on susceptibility to infectious diseases, **29**:102
Age-specific susceptibility to viruses, **28**:382
Agglutinating *Hansenula weingei*
—evolution and ecology, **32**:139
Agglutinogen
—of *B. pertussis*, **27**:325
—on red-cell surfaces, **27**:191
Agricultural commodities
—aflatoxin in, **30**:795
Agricultural experiment stations
—establishment of, **27**:405
Agrobacterium
—in major bacterial grouping, **34**:40
Air samplers, **30**:559, 571
Airborne infections, **30**:485, 696
Algae
—blue-green, deoxyribonucleic acid of, **31**:315
—polyphosphate utilization by, **30**:772
Algal toxins
—mode of action, **31**:180
Aliphatic glycols
—bacterial oxidation of, **28**:164
Allescheria
—nutrition of, **29**:406
Allosteric controls
—of amphibolic pathways in bacteria, **34**:20
Alternaria
—phytotoxin production by, **28**:181
Alveicins, **29**:24
Alpha-D-Mannosidase
—(mannosidostreptomycinase) biochemistry and regulation of formation, **34**:1
Amino acid
—catabolism by group D streptococci, **28**:330
Amino acid activating enzymes
—role in cellular physiology, **30**:701
Amino acid incorporation
—by normal cells, **28**:3
—by virus-infected cells, **28**:3
Amino acid pools
—substrate source for endogenous respiration, **28**:126
Amino acid starvation
—effect on chromosome replication, **30**:3
Amino acids
—aromatic, **32**:465
—inhibition of aspartokinase activity by, **27**:170
—in whole cell walls of gram-positive bacteria, **27**:18
—of mycoplasmas, **29**:185
—requirements of fungi, **29**:406
Aminoacyl transfer ribonucleic acid synthetases
—role in protein biosynthesis, **33**:264
Amphibolic pathways
—end-product control, **34**:10

* Cumulative author and subject indexes to volumes 23–26 were published in the December 1962 issue.

—in bacteria, allosteric controls, **34**:20
—nature of enzymatic controls, **34**:20
—nature of enzymes, **34**:20
Amphotericin therapy
—of mycotic infections, **31**:25
Anamnestic antibody response, **30**:418
Anemias
—hemolytic, resistance to, **27**:191
Animal cells
—ribonucleic acids from, **32**:262
Animal health
—effect of microorganisms on, **29**:251
Animal viruses
—mechanisms of perpetuation, **33**:404
—*see* Viruses, animal
Animals
—as host for perpetuating viruses, **33**:404
Anthrax
—industrial inhalation, **30**:647
Anthrax toxin
—classification, **31**:95
Antibacterial action
—in respiratory system, **30**:488
Antibiotic blocks
—of the ribosome cycle, **33**:445
Antibiotic inhibitors
—of the bacterial ribosome, **32**:493
Antibiotic prophylaxis
—of tularemia, **30**:542
Antibiotic sensitivity
—of caulobacters, **28**:231
Antibiotic sensitivity
—of mycoplasmas, **29**:185
Antibiotics
—effect on candidiasis, **30**:442
—effect on cell-wall synthesis, **27**:18
—influence on plant growth, **28**:181
—role in sporulation, **33**:48
Antibody
—heterogeneity, **31**:157
—labeled, assay for, **30**:383
—*T. pallidum*, **29**:222
—to *Francisella tularensis*, **30**:539
Antibody formation
—relation of antigen affinity for white cells, **32**:404
Antibody production
—factors influencing, **31**:157
Antibody response
—secondary, **30**:408
Antibody site
—localization in immunoglobulin molecule, **33**:159
Antigenic structure
—of *Listeria monocytogenes*, **30**:309
Antigens
—affinity for white cells, **32**:404
Antigens
—erythrocyte surface, alteration of, **27**:191
—of *B. pertussis*, **27**:325
—of *Enterobacteriaceae*, **30**:192
—of hemolytic streptococcal cell walls, **27**:369
—production in virus-infected cell cultures, **30**:152
—soluble of viruses, **27**:381
—surface from gram-negative bacteria, **27**:352
Antigen-antibody precipitation
—inhibition of, **27**:369
Antiviral chemotherapy
—in herpetic infection, **28**:458
Antiviral compounds
—mechanism of action, **30**:33
Arbovirus infections
—epidemiology of, **31**:65
Arboviruses, **29**:1
Arginine biosynthesis
—role of carbamyl phosphate synthetase, **34**:278
Arizonacins, **29**:24
Aromatic biosynthesis
—pathways, **32**:465
Aromatic hydroxy acids
—and iron uptake, **34**:99
Arthritis
—mycoplasmas in, **29**:185
Arthrobotrys conoides
—characteristics of, **27**:282
Arthropod vectors
—of Venezuelan equine encephalitis virus, **31**:65
Ascomycetes
—DNA base composition, **34**:126
Aspartate metabolism
—in *E. coli*, **27**:170
Aspergillus
—phytotoxin production by, **28**:181
Asporogenous mutants
—use in studying sporulation, **33**:48
Assay
—of penicillinacylase, **30**:769
Asticcacaulis
—morphology of, **28**:231
Azotobacter
—flagellation of, **29**:442
—in major bacterial grouping, **34**:40

Bacilli
—sporulation of, **33**:48
—tuberculosis caused by, **29**:466
Bacillus
—bacteriophages, **31**:230
—identification of genetic functions in, **32**:305
—in major bacterial grouping, **34**:40
—ultrastructure of spores and vegetative cells, **33**:346
—use as microbial insecticide, **29**:364
Bacillus anthracis
—detection of, **29**:222
—transduction in, **32**:358

XUM

Bacillus cereus
—transduction in, **32**:358
Bacillus lentimorbus
—in milky disease of Japanese beetle, **29**:373
Bacillus popilliae
—in milky disease of Japanese beetle, **29**:373
Bacillus stearothermophilus
—protein synthesis, **32**:27
Bacillus subtilis
—alteration of host specificity, **32**:297
—competence for transformation and transfection, **32**:313
—development of competence for transfection, **32**:370
—fine structure of, **29**:277, 299
—infected, host synthesis in, **32**:379
—infectious prophage, **32**:349
—transformation, **32**:291
Bacitracin A
—inhibition of cell-wall synthesis by, **27**:18
Bacteria
—alosteric controls of amphibolic pathways, **34**:20
—gene expression, **34**:222
—genetics and taxonomy, **34**:40
—gram-positive, cell walls of, **27**:18
—histamine-sensitizing properties, **32**:103
—nucleus and membrane, **32**:39
Bacterial competence
—factors affecting, **32**:313
Bacterial deoxyribonucleic acid, **31**:215
Bacterial extrachromosomal elements
—genetic analysis, **33**:210
—recognition and identification, **33**:210
Bacterial ferredoxin
—isolation, **28**:497
Bacterial flagella
—genetics and chemistry, **33**:454
—growth and self-assembly, **33**:302
Bacterial glycolipids
—a review, **34**:365
Bacterial groupings
—major genetic groups, **34**:40
Bacterial growth
—and the cell envelope, **34**:194
Bacterial invasion
—as cause of inflammation, **27**:117
Bacterial iron uptake
—sideramines and aromatic hydroxy acids, **34**:99
Bacterial matings
—intergeneric, **32**:362
Bacterial molecular physiology
—models, **33**:172
Bacterial pathogenicity, **32**:164
Bacterial photosynthesis
—reaction of, **32**:243
Bacterial plasmids
—description and classification, **33**:210
—replication, **33**:210
—somatic functions, **33**:210
—transmissible, relationship to drug-resistance factors, **32**:55
Bacterial response
—to ionic environment, **28**:296
Bacterial ribosome
—antibiotic inhibitors, **32**:493
Bacterial ribosomes
—a review of progress, **34**:228
Bacterial taxonomy
—and genetic transfer, **34**:40
Bacteriocins, **24**:29; **34**:344
—and corynebacteria, **34**:378
—classification of, **31**:230
—ultrastructure of, **31**:230
Bacteriolytic
—particles, classes of, **31**:230
Bacteriolytic enzymes
—use in determination of wall structure, **32**:425
Bacteriophage deoxyribonucleic acids
—from *B. subtilis*, **32**:349
Bacteriophage ghosts
—biological activity, **34**:344
Bacteriophage, host
—restriction, **32**:297
Bacteriophage-infected *Bacillus subtilis*
—host synthesis in, **32**:379
Bacteriophage infection
—gene transfer, **34**:40
Bacteriophage induction
—by aflatoxins, **30**:471
Bacteriophage P22
—mediated transduction, **31**:354
Bacteriophage propagation
—techniques of, **27**:253
Bacteriophage T5
—first-step-transfer deoxyribonucleic acid of, **32**:227
Bacteriophage types
—of staphylococci, **27**:56
—reproducibility of, **27**:253
Bacteriophage typing
—of staphylococci, **27**:253
—scheme for distinguishing between related corynebacteria, **34**:378
Bacteriophages
—classification of, **31**:230
—effect of pressure on, **28**:14
—of *Pseudomonas*, **33**:419
—specificity for caulobacters, **28**:231
—susceptibility of vibrios, **28**:72
—take-over of host functions, **34**:344
—ultrastructure of, **31**:230
Balassa, Rozsi
—work of, **27**:228
Basement membrane
—in vascular permeability, **27**:117

Base sequences
—arrangement in deoxyribonucleic acid, **31**:215
Bases
—metabolism, **34**:278
Basidiospore germination
—cellular features of, **33**:505
Bdellovibrio bacteriovorus
—multiplication in bacteria, **31**:230
Biochemical function
—of mycobactins, **34**:99
—of water-soluble sideramines, **34**:99
Biochemical pathways
—biological units of, **27**:182
Biochemistry
—of Phycomyces, **33**:99
—of ribonucleic acid, **32**:262
Biodynamic effects
—of oligonucleotides, **31**:83
Bioelectrochemistry
—of microorganisms **34**:67, 68, 80, 94, 101
Biological activity
—of phage ghosts, **34**:344
Biological structures
—self-assembly of, **33**:302
Biologicals
—for control of virus disease, **28**:493
Biosynthesis
—of deoxyribonucleotides, **34**:278
—of glycolipids, **34**:365
—of mycobactins, **34**:99
—of ribosomal proteins, **34**:228
—of ribosomes, **34**:228
—of rRNA, **34**:228
—of streptomycin, **34**:1
—of the *N*-methyl-L-glucosamine moiety, **34**:1
—of the streptidine moiety, **34**-1
—of the streptose moiety, **34**:1
Biosynthetic pathways
—enzyme controls, **34**:10
Biotechnology
—definition of, **28**:14
Birth-death model
—in experimental microbiology, **29**:102
Blastomyces
—nutrition of, **29**:406
Blastomyces dermatitidis
—in mycotic disease, **31**:6, 25, 35
Blastomycosis
—epidemiological aspects of, **31**:25
Blood clearance
—of viruses, **28**:30
Blood groups, **30**:427
Blue-green algae
—deoxyribonucleic acid of, **31**:315
—thermophilic species, **33**:476
Bordetella
—in major bacterial grouping, **34**:40
Bordetella pertussis
—activities of antigens, **27**:325
—histamine-sensitizing, from factors **32**:103
—identification of, **29**:222
—removal of labile toxins from, **28**:14
—structure of, **27**:325
Borreliae, **29**:46
Botulinum toxin
—classification of, **31**:95
Bovine-type bacilli
—tuberculosis caused by, **29**:466
Brevibacterium
—as a candidate for the genus *Corynebacterium*, **34**:378
5-Bromodeoxyuridine
—action against poxviruses, **30**:33
Bronchopneumonia
—effect of blood group on, **30**:427
Brucella
—detection of, **29**:222
—in major bacterial grouping, **34**:40
—intracellular multiplication in mononuclear phagocytes, **27**:391

Calves,
—neonatal disease of, **29**:75
Candida
—nutrition of, **29**:406
Candida bogoriensis
—lipids of, **31**:194
Candidiasis
—effect of antibiotics on, **30**:442
Capillaries
—ultrastructure of, **27**:117
Capillary endothelium
—localization of viruses in, **28**:30
Caratovoricins, **29**:24
Carbamyl phosphate synthetase
—in arginine and pyrimidine biosynthesis, **34**:278
Carbohydrate metabolism
—in *S. maxima*, **34**:82
Carbohydrate utilization
—and corynebacteria, **34**:378
Carbohydrates
—extraction from cell walls, **27**:369
Carbon metabolism
—of sulfate-reducing bacteria, **29**:425
Carcinogenic properties
—of aflatoxins, **30**:460, 471
Carcinogens
—interactions with viruses, **28**:480
Carrier cells
—viral infection in, **32**:387
Catabolic pathways
—enzyme controls, **34**:20
Catalase
—and corynebacteria, **34**:378
Caulobacter groups
—classification of, **28**:231

XUM

Caulobacteraceae
—in major bacterial grouping, **34**:40
Cell division
—and DNA replication, **34**:194
Cell envelopes
—and bacterial growth, **34**:194
—and DNA, **34**:194
—of the corynebacterial cell, **34**:378
—structure of, **28**:97
Cell-free systems
—for study of mucopeptide biosynthesis, **27**:18
Cell metabolism
—role of bacteriolytic enzymes, **32**:425
Cell surface changes
—during phage and ghost infection, **34**:344
Cell-wall synthesis
—inhibition by antibiotics, **27**:18
Cell walls
—biosynthesis of, **27**:18
—chemical structure of, **27**:18
—isolation of, **27**:18
—micellar structure in, **27**:352
—of gram-positive organisms, **17**:18
—of hemolytic streptococci, **27**:369
—of *Mucor rouxii*, **27**:293
—replication, **29**:326, 345
—synthesis, **29**:345
—yeast fractionation of, **27**:305
Cellular hypersensitivity
—in the pathogenesis of tuberculosis, **32**:85
Cellular immunity, **27**:391
—in the pathogenesis of tuberculosis, **32**:85
Cellular location
—of glycolipids, **34**:365
Cellular motility
—genetics and chemistry of bacterial flagella, **33**:454
Cellulose
—synthesis by *S. ventriculi*, **34**:82
Cerebrospinal fluid
—role in virus disease, **28**:72
Cerecins, **29**:24
Chelate-dependent microbes, **30**:114
Chemical composition
—of *Mycoplasma* cells and envelopes, **28**:97
Chemistry
—of glycolipids, **34**:365
Chemistry and genetics
—of bacterial flagella, **33**:454
Children
—adenovirus infection of, **29**:487
Chloramphenicol
—effect on ghost infection, **34**:344
—inhibition of antibody synthesis by, **30**:408
Chlorpromazine
—effect on *E. coli* metabolism, **30**:80
Cholera
—El Tor vibrios in, **28**:72
Cholinesterase
—hydrolysis of thiocholine by, **30**:94
Chondrioids
—of *Bacillus subtilis*, **29**:299
Chromatography
—in virus isolation, **28**:391
Chromosome (bacterial) transfer
—by conjugation; gene transfer, **34**:40
Chromosome replication
—regulation of, **30**:3
Chromosome transfer
—in bacterial conjugation, **29**:161
Chronic infection
—for perpetuation of animal viruses, **33**:404
Citric acid cycle
—regulation by DPNH, **34**:20
Classification of bacteria
—flagellation in, **29**:442
Clinical laboratory data
—electronic handling of, **29**:554
Cloacins, **29**:24
Clostridia
—ferredoxin from, **28**:497
—sporulation of, **33**:48
Clostridium
—in major bacterial grouping, **34**:40
—use as microbial insecticide, **29**:364
Clostridium pasteurianum
—electron carrier from, **28**:497
CMN group
—*Corynebacterium*, *Mycobacterium*, and *Nocardia*, **34**:378
Cocci (packet-forming)
—taxonomy, **34**:82
Coccidioides
—nutrition of, **29**:406
Coccidioides immitis
—in mycotic disease, **31**:6, 25, 35
Coccidioidomycosis
—epidemiology, **30**:678; **31**:25
Coenzyme nature
—of ferredoxin, **28**:497
Coenzymes (reduced)
—as control signals, **34**:20
—control of glucogenesis, **34**:10
—control of glycogenesis, **34**:20
—regulation of converging channels, **34**:20
—regulation of oxidative pentose pathway, **34**:20
—regulation of the citric acid cycle by DPNH, **34**:20
Coleman's organism
—nomenclature of, **29**:359
Colibacillosis
—*E. coli* isolated from, **29**:75
Colicins
—classification of, **29**:24
—structure of, **31**:230

Coliphages
—infective process of, **31**:230
—structure of, **31**:230
Common cold
—specific immunity to, **28**:423
—virus, rhinovirus as, **28**:409
Competence for transfection
—in *Bacillus subtilis*, **32**:370
Complex bacteriophages
—self-assembly, **33**:302
Computers
—search routines, **29**:554
Congenital transmission
—role in perpetuation of animal viruses, **33**:404
Conjugation
—chromosome transfer in, **29**:161
—mechanism in *E. coli* K-12, **32**:320
Contagium vivum
—doctrine of, **28**:87
Control mechanism
—genes, **34**:222
Cordyceps
—infection of insects by, **29**:382
Corrosion
—bacterial, **29**:425
Corticosteroids
—requirement for antibody synthesis, **30**:408
Corynebacteria
—enzymes, pigments, and products, **34**:378
—polyphosphate utilization by, **30**:772
—populations, **34**:378
—true, properties, **34**:378
Corynebacterial cell
—morphology and ultrastructural anatomy, **34**:378
Corynebacteriophages
—containing DNA, **34**:378
Corynobacterium
—and *Corynebacterium*, **34**:378
—in major bacterial grouping, **34**:40
—in the *CMN* group, **34**:378
—related genera, **34**:378
—unrelated species, **34**:378
Corynebacterium acnes
—place among true corynebacteria, **34**:378
Corynebacterium betae
—place among true corynebacteria, **34**:378
Corynebacterium diphtheriae
—revised description, **34**:378
—the type species of the genus, **34**:378
Corynebacterium flaccumfaciens
—place among true corynebacteria, **34**:378
Corynebacterium parvum
—place among true corynebacteria, **34**:378
Corynebacterium poinsettiae
—place among true corynebacteria, **34**:378
Corynebacterium pyogenes
—place among true corynebacteria, **34**:378
Corynebacterium tritici
—place among true corynebacteria, **34**:378
Corynemonas
—and *Corynebacterium*, **34**:378
Corynethrix
—and *Corynebacterium*, **34**:378
Coxsackieviruses
—age-specific susceptibility to, **28**:382
—classification of, **29**:173
—respiratory disease from, **30**:517
Crawford, John (1746–1813), **28**:87
Cryptococcosis
—epidemiological aspects of, **31**:25
Cryptococcus
—nutrition of, **29**:406
Cryptococcus neoformans
—in mycotic disease, **31**:6, 25, 35
Crystalline oxygenases
—of pseudomonads, **30**:720
Current generation
—by metabolizing systems, **30**:80
Current linkage map
—of *E. coli*, **34**:155
—of *S. typhimurium*, **34**:176
Cyanophyta
—deoxyribonucleic acid of, **31**:315
Cystinase
—and corynebacteria, **34**:378
Cytochromes
—and corynebacteria, **34**:378
Cytology
—of Phycomyces, **33**:99
Cytoplasmic structure
—of cells, **29**:299
Cytosine-5′-monophosphate
—de novo synthesis, **34**:278

D-Cycloserine, *see* Oxamycin
Data-processing
—applications, **29**:560
De novo synthesis
—of pyrimidine nucleotides, **34**:268
Deoxyribonuclease
—and corynebacteria, **34**:378
Deoxyribonucleic acid
—and the cell envelope, **34**:194
—base sequences in, **31**:215
—effect of pressure, **28**:14
—in cornynbacteriophages, **34**:378
—molecular state of, **29**:277
—of blue-green algae, **31**:315
—of fungi, **34**:126
—of poxviruses, **30**:33
—of the recipient cell, its role in transformtaion, **32**: 291
—review of research progress, **32**:127

XUM

—role in bacterial transformation, **27**:228
—viruses, **29**:1
Deoxyribonucleic acid replication
—and cell division, **34**:194
Deoxyribonucleic acid synthesis
—effect of oligonucleotides on, **31**:83
—effect of poliovirus **28**:3
Deoxyribonucleoside catabolism
—genetics and regulation, **34**:278
Deoxyribonucleotides
—biosynthesis, **34**:278
Desulfotomaculum
—description of genus, **29**:359
Desulfovibrio
—classification, **30**:732
Desulfovibrio orientis
—nomenclature of, **29**:359
Detoxification
—of endotoxic preparations, **33**:72
Deuteromycetes
—DNA base composition, **34**:126
Dialysis
—principles, **33**:1
Dialysis culture of microorganisms
—design, theory, and results, **33**:1
Diaminopimelic acid
—biosynthesis of, **27**:18
Dictyostelium discoideum
—life cycle of, **27**:273
Dimorphism
—biochemical bases of, **27**:293
Diphosphopyridine nucleotide (reduced)
—control of enzymes, **34**:20
—regulation of the citric acid cycle, **34**:20
Diphtheria
—and the discovery of *C. diphtheriae*, **34**:378
Diphtheria toxin
—classification of, **31**:95
Document collection
—bacteriological information in, **29**:546
Drug-resistance factors
—in *Enterobacteriaceae*, **32**:55
Drug resistance, multiple
—biochemical mechanisms and genetics, **27**:87

Echoviruses
—classification of, **29**:173
Ecology
—of respiratory mycotic disease agents, **31**:6
Education
—for microbiologists, **31**:175
Egg-borne viruses, **28**:490
El Tor vibrio
—role in cholera, **28**:72
Electrical potential
—of membranes, **30**:68
Electrochemical analysis
—of enzymatic reactions, **30**:9+
Electrochemical aspects of metabolism, **30**:80
Electron microscopy
—of animal viruses, **27**:381
—of bacteriophages, **31**:230
—of capillary venules, **27**:117
—of viruses, **29**:477
Electron transport
—low-potential, **28**:497
Electron transport reactions
—of bacterial photosynthesis, **32**:243
Electronic handling
—of clinical laboratory data, **29**:554
Electrophoresis
—in virus isolation, **28**:391
Empty protein coats
—(ghosts) biological activity, **34**:344
Encephalomyelitis
—allergic, complete Freund's adjuvant in, **27**:341
Endogenous metabolism
—of bacteria, **28**:126
Endogenous reserves
—utilization of, **27**:273
Endotoxic O antigen
—relationship to hapten, **27**:352
Endotoxic reactions
—molecular aspects of, **33**:72
Endotoxin
—*Candida albicans*, **30**:442
Endotoxins
—biological properties, **33**:72
—chemical properties and constituents, **33**:72
—relationship of structure to biological effects, **33**:72
Enterobacteriaceae
—and allied taxa in major bacterial grouping, **34**:40
—antigens of, **30**:192
—drug-resistance factors, **32**:55
—extrachromosomal elements, **33**:210
Enterococci
—characteristics of, **28**:330
—differentiation from other streptococci, **28**:330
Enterococcins, **29**:24
Enterovirus infection
—diagnosis of, **28**:400
Enteroviruses
—cellular susceptibility to, **28**:382
—classification of, **29**:173
—in specific host cells, **28**:3
—species specificity of, **28**:382
Entomophthora
—infection of insects by, **29**:382
Environment
—bacterial response to, **28**:296
Enzymatic activities
—of *Mycoplasma*, **28**:97

Enzymatic reactions
—electrochemical analysis of, **30**:94
Enzymatic reduction
—of ferredoxin, **28**:497
Enzyme activity
—relationship to viruses, **29**:143
Enzyme controls
—energy linked, **34**:20
—in biosynthetic and catabolic pathways, **34**:20
—interaction of feedback loops in diverging channels, **34**:20
—precursor activation, **34**:20
Enzyme synthesis
—repressors of, **27**:182
Enzymes
—amino acid activating, **30**:701
—bacteriolytic, role in metabolism, **32**:425
—effect on cell walls, **27**:18
—in amphibolic pathways, **34**:20
—induced, effect on carbohydrate, **27**:369
—multiple forms of, **27**:155, 170, 182
—*see also* Esterase, Hexokinase, Phosphatase
Epidemiology
—of respiratory mycotic disease agents, **31**:25
Episomes
—as resistance transfer factors, **27**:87
Erysipelothrix insidiosa
—differentiation from *L. monocytogenes*, **30**:309
Erythrocyte hemagglutination
—for typing adenoviruses, **29**:487
Erythrocyte membrane
—morphology of, **27**:191
Erythrocyte surface antigens
—alteration of, **27**:191
Erythrocytes
—enzymatic action on, **27**:191
Escherichia coli
—aspartokinases of, **27**:170
—bacteriophages, **31**:230
—current linkage map, **34**:155
—endogenous metabolism of, **28**:126
—enteropathogenic, **29**: 222
—ionic distribution in, **30**:68
—linkage map, **31**:332
—mating types in, **29**:161
—multiple drug resistant, **27**:87
—relation to neonatal disease of calves, **29**:75
—ribonucleic acid control locus, **32**:206
—thymine-requiring mutants, **34**:278
Escherichia coli B
—biosynthesis of deoxyribonucleotides, **34**:278
Escherichia coli K-12
—conjugation in, **32**:320
Esterase
—in maize, forms of, **27**:155
Ethylene glycol
—glycolic acid formation by, **28**:164
Eubacteria
—sporulation in, **33**:48
—sporulation mutants in, **33**:48
Eubacteriales
—phosphatides of, **31**:54
Eukaryotic microorganisms
—systems for study of morphogenesis, **33**:505
Exoenzymes
—role in sporulation, **33**:48
Exotoxins
—role in sporulation, **33**:48
Extrachromosomal inheritance
—in bacteria, **33**:210

F^- recipients of *Escherichia coli*
—conjugation with Hfr donors, **32**:320
F′ strains
—chromosome transfer by, **29**:161
Fatty acids
—possible role in endotoxicity, **33**:72
—short-chain, pathways of metabolism, **32**:1
Fermentation
—of streptomycin, **34**:1
Ferredoxin
—bacterial, **28**:497
Fertilizers
—bacterial, **29**:251
Fetal damage
—by rubella virus, **28**:444, 452
Fibers of muscle and connective tissue
—self-assembly of, **33**:302
Fibrin clots
—self-assembly of, **33**:302
Filamentous bacterial viruses
—genetics of, **33**:172
—interaction between viral and host functions, **33**:172
—model of the molecular physiology, **33**:172
—physiology of infection, **33**:172
Filtration
—of viruses, **29**:477
Filtration pressure
—effect on vascular permeability, **27**:117
Fine structure
—of bacteria, **29**:277, 299, 326, 345
"First-order" concept of viral inactivation, **28**:150
First-step-transfer deoxyribonucleic acid
—of bacteriophage T5, **32**:227
Fish
—listeric infection in, **30**:309
Fixation
—of cells, **29**:277
Flagella
—bacterial, **29**:442
—genetics and chemistry, **33**:454
Fluocins, **29**:24
Fluorescent-antibody techniques
—in diagnostic bacteriology, **29**:222
—in study of viruses, **28**:30

XUM

Food
—antibacterial substances, **29**:397
Food-borne viruses, **28**:490
Food production
—increasing through microbiology, **29**:251
Food products
—aflatoxin in, **30**:795
Food poisoning
—streptococci in, **28**:330
Fowl
—listeric infection in, **30**:309
—susceptibility to Venezuelan equine encephalitis virus, **30**:589
Fowl plague virus
—reproduction, **27**:1
—structure, **27**:1
Francisella
—detection of, **29**:222
Francisella tularensis
—respiratory antibody to, **30**:539
Freeze-etching study
—of aerobic spore-forming bacteria, **33**:346
Freshwater
—caulobacters from, **28**:231
Frozen cells
—action of pressure on, **28**:14
Fruiting
—biochemical changes in, **33**:505
—environmental control of, **33**:505
—ultrastructural features, **33**:505
Fuel cells
—biochemical, **30**:101
Fungal
—vaccines, **31**:35
Fungal deoxyribonucleic acid
—taxonomic significance of diversity in GC content, **34**:126
Fungal parasites, **29**:382
Fungi
—as agents of pulmonary mycoses, **31**:6, 25
—determination of GC contents, **34**:126
—DNA, **34**:126
—extraction and purification of DNA, **34**:126
—in insects, **29**:397
—morphogenesis in, **27**:273, 282, 293, 305
—nematode-trapping, **27**:282; **29**:382
—nucleotide composition analyses, **34**:126
—pathogenic, nutrition of, **29**:406
—polyphosphate utilization by, **30**:772
—producing aflatoxin, **30**:795
Fusarium
—phytotoxin production by, **28**:181

Gastrointestinal tract
—diseases of, **30**:427
Gene arrangement
—in *Pseudomonas*, **33**:419
Gene conservation
—in *Bacillus*, **32**:305
Gene expression
—in bacteria, **34**:222
Gene transfer
—types, **34**:40
Genes
—control mechanism, **34**:222
—expression and regulation, **34**:222
Genetic analysis
—of *S. coelicolor*, **31**:373
Genetic mapping
—of *E. coli*, **31**:332; **34**:155
—of *S. typhimurium*, **31**:354; **34**:176
Genetic markers
—evolutionary implications of, **30**:114
Genetic nomenclature, **31**:332, 354
Genetic recombination
—in *Pseudomonas*, **33**:419
—of poxviruses, **30**:33
Genetic relatedness
—in *Bacillus*, **32**:305
Genetic relationship
—forms, **34**:40
Genetic studies
—of inbred rabbits, **29**:466
Genetic transfer
—and bacterial taxonomy, **34**:40
Genetics
—of bacteria, **34**:40
—of *E. coli* K-12, **29**:161
—of phycomyces, **33**:99
Genetics and chemistry
—of bacterial flagella, **33**:454
Genitourinary tract disease
—mycoplasmas, **29**:185
Genome structure
—of *S. coelicolor*, **31**:373
Germination
—biochemical changes in, **33**:505
Ghosts
—bacteriophage; biological activity, **34**:344
—methods of study, **34**:344
Gibberella fujikuroi
—phytotoxin production, **28**:181
Gluconobacter suboxydans
—oxidation of ethylene glycol derivatives, **28**:164
Glucose
—conversion to myo-inositol, **34**:1
—effect on chromosome replication, **30**:3
—oxidation, **30**:94
Glucose fermentation
—in *S. ventriculi*, **34**:82
Glutamate oxidation
—in the slime mold, **27**:273
Glycogen
—substrate for endogenous metabolism, **28**:126

Glycogenesis
—control, **34**:20
Glycol oxidation
—enzymology of, **28**:164
Glycolic acid
—formation by ethylene glycol, **28**:164
Glycolipids
—a review, **34**:365
—acylated sugar derivatives, **34**:365
—glycosyl diglycerides, **34**:365
Glycols
—oxidation by acetic acid bacteria, **28**:164
Glycoside hydrolases
—and corynebacteria, **34**:378
Glycosyl diglycerides
—of glycolipids, **34**:365
Glyoxylate
—relationship to fatty acid metabolism, **32**:1
Glyoxylate-condensing enzymes
—formation **32**:1
Gram negative
—genetic groups of bacteria, **34**:40
Gram-negative bacteria
—structure, **32**:39
Gram positive
—genetic groups of bacteria, **34**:40
Gram-positive bacteria
—structure, **32**:39
Growth
—of caulobacters, **28**:231
—of cell walls, **34**:194
Growth, bacterial
—and the cell envelope, **34**:194
Growth inhibitors
—in plants, **28**:181
Growth response
—in dialysis culture, **33**:1
Guanine-plus-cytosine content
—of fungi, **34**:126
—phylogenetic significance of diversity in fungal DNA, **34**:126
—taxonomic significance of diversity in fungal DNA, **34**:126
Guanine-plus-cytosine ratios
—genetic relationship, **34**:40

Haemophilus
—genetic transformation, **27**:228
—in major bacterial grouping, **34**:40
Hansenula ciferri
—sphingosines from, **31**:194
Hansenula wingei
—molecular basis of mating, **32**:139
Hapten
—origin, **27**:352
—relationship to endotoxic O antigen, **27**:352
Harposporium
—infection of nematodes by, **29**:382
Heat-stable and -labile toxins
—in *Bordetella pertussis*, **27**:325
Hemagglutination-inhibition test
—for typing adenoviruses, **29**:487
Hemagglutinin
—of *Bordetella pertussis*, **27**:325
Hemolysin
—and corynebacteria, **34**:378
Hemolytic streptococci
—antigens of, **27**:369
Hemopoietic diseases
—malignant, **28**:490
Hemorrhagic fevers, **30**:739
Hepatic cells
—infection, **28**:30
Herpes simplex infection
—in man, latent, **28**:472
Herpes simplex virus, **28**:458
—synthesis of, **27**:381
Herpesvirus hominis
—virus of herpes simplex, **28**:458
Herpesviruses, **29**:1
—latent, **28**:472
Heterokaryosis
—ultrastructure and metabolism in, **33**:505
Hexosamines
—in yeast cell walls, **27**:305
—yeast, forms of, **27**:155
Hfr donors of *Escherichia coli*
—conjugation with F^- recipients, **32**:320
Hfr strains
—chromosome transfer by, **29**:161
Histamine
—ability to reproduce vascular changes of injury, **27**:117
Histamine-sensitizing factor
—in *Bordetella pertussis*, **27**:325
Histamine-sensitizing properties
—of bacteria, **32**:103
Histoplasma
—nutrition of, **29**:406
Histoplasma capsulatum
—in mycotic disease, **31**:6, 25, 35
Histoplasmosis
—epidemiological aspects of, **31**:25
History of biological nitrogen fixation, **27**:405
History of scientific journals, **28**:211
Homobasidiomycetidae
—DNA base composition, **34**:126
Hormones, steroid
—inhibition of antibody synthesis by, **30**:408
Host cells
—effect of poliovirus on, **28**:3
Host-controlled modification
—in *Pseudomonas*, **33**:419
Host-dependent microbes, **30**:114
Host heterogeneity
—effect on response-probability curves, **29**:102

XUM

Hostparasite interactions, **30**:136
Host-reactive properties
—of mycobacteria, **27**:341
Host specificity
—in *B. subtilis*, alteration, **32**:297
Host susceptibility
—variations in, **29**:102
Host synthesis
—in infected *B. subtilis*, **32**:379
—inhibition after phage infection, **34**:344
Human papova (wart) virus, **31**:111
Human-type bacilli
—tuberculosis caused by, **29**:466
Hybridization, chromosomal
—of *Salmonella* and *Proteus* with *E. coli*, **32**:362
Hydrogen metabolism
—of sulfate-reducing bacteria, **29**:425
Hydrostatic pressure
—effect in microbial systems, **28**:14
Hydroxy acids (aromatic)
—and iron uptake, **34**:99
Hypersensitivity
—due to bacilli, **27**:341
Hypoxanthine
—oxidation, **28**:497

Ichthyotoxin
—mode of action of, **31**:180
Immune response
—in vitro studies, **30**:383, 397, 408, 418
—to viruses, **28**:30
Immunity
—in insects, **29**:397
—to typhoid, **27**:391
—transfer with serum from immune animals, **27**:391
Immunization
—with live tularemia vaccine, **30**:532
Immunochemistry
—of 0 and R antigens, **30**:192
Immunocytes
—differentiated, **33**:159
Immunofluorescence
—diagnostic applications of, **28**:402; **29**:222
—for observation of cell-wall replication, **29**:326
—use in virology, **28**:397
Immunoglobulin molecules
—homogeneity of, **33**:159
Immunoglobulins
—classes of, **31**:157
—primary structure of, **33**:159
Impinger
—multistage liquid, **30**:559
In vitro systems
—application of dialysis culture, **33**:1
In vivo systems
—application of dialysis culture, **33**:1
Inactivation of viruses, **28**:150
Independent-action model
—in experimental microbiology, **29**:102
Infants
—adenovirus infection of, **29**:487
Infectious mononucleosis
—enzymatic test for, **27**:191
Infectiousness of microorganisms, **29**:102
Inflammation
—as a defense against bacteria, **27**:117
Inflammatory response, **27**:117
Influenza
—protective effect of live vaccine, **28**:423
Influenza viruses
—identification, **29**:496
—structure of, **27**:381
Information science
—symposium, **29**:505, 506, 516, 523, 534, 544, 546, 560, 577
Information systems engineering, **29**:546
Inhibitors
—of the bacterial ribosome, **32**:493
Interconversions
—of nucleotides, **34**:278
Interferon
—effect on cellular resistance, **27**:72
—effect on virus replication, **30**:152
—endogenous production by cells, **27**:72
—identification of, **28**:367
—induction by Newcastle disease virus, **31**:145
—induction by nonviral agents, **31**:132, 138
—induction by statolon, **31**:132, 138
—induction by trachoma-inclusion conjunctivitis agents, **31**:138
—induction by viral agents, **31**:138
—induction, cellular resistance to, **31**:145
—molecular species of, **31**:138
Intergeneric bacterial matings, **32**:362
Insect vectors
—of borreliae, **29**:46
Insecticides
—microbial, **29**:364, 373, 382, 388, 397
Insects
—antibacterial substances in, **29**:397
—fungal parasites of, **29**:382
—microbiological control of, **29**:251
Interaction between viral and host functions
—of filamentous bacterial viruses, **33**:172
Invertebrates
—diseases of, **29**:388
5-Iododeoxyuridine
—action against poxviruses, **30**:33
Ionic distribution
—in *E. coli*, **30**:68
Ionic environment
—bacterial response to, **28**:296
Iron
—influence on mycobactins, **34**:99

Iron metabolism
—and corynebacteria, **34**:378
Iron transport theories
—in biochemical function of the mycobactins, **34**:99
Iron uptake
—sideramines and aromatic hydroxy acids, **34**:99
Isocitric dehydrogenase
—of yeast, **27**:155

Japanese beetle
—milky disease of, **29**:373
Journals
—growth in numbers, **29**:523
—scientific, history, **28**:211

2-Keto-inositol
—from myo-inositol, **34**:1
2-Keto-myo-inositol
—conversion to streptidine, **34**:1
α-Ketoglutarate
—ferredoxin reduction by, **28**:497
Keyword-indexed reference pool, **29**:577

L cells
—pretreated with interferon, **31**:145
L forms
—of *Listeria monocytogenes*, **30**:309
—relationship to mycoplasmas, **29**:185
L-type organisms
—physiology of, **28**:97
Labeling techniques
—in viral disease diagnosis, **28**:397, 400
Lactic dehydrogenase
—forms of, **27**:155
Lactic dehydrogenase virus, **29**:143
Lactobacillus
—in major bacterial grouping, **34**:40
Lactobacillus arabinosus
—isolation of phosphate polymers from, **27**:18
Lactobacillus leichmanni
—biosynthesis of deoxyribonucleotides, **34**:278
Latent virus infections
—in primate tissues, **32**:185
Layers outside of bacterial cell walls
—self-assembly of, **33**:302
Leptospira
—detection, **29**:222
Leuconostoc
—in major bacterial grouping, **34**:40
Leukocyte cultures
—reaction to homologous cells, **30**:397
Leukocytes
—emigration of, **27**:117
Life cycle
—of Phycomyces, **33**:99
Light intensity
—responses of thermophilic blue-green algae, **33**:476
Linkage map
—of *E. coli*, **31**:332; **34**:155
—of *S. typhimurium*, **31**:354; **34**:176
Lipid requirements
—of mycoplasmas, **29**:185
Lipids
—bacterial, **31**:54
—from yeast cell walls, **27**:305
—of yeasts, extracellular, **31**:194
Listeria
—in major bacterial grouping, **34**:40
Listeria monocytogenes
—detection, **29**:222
—infections, **30**:309
Listeric infections, **30**:309
Liver
—virus infections of, **28**:30
Lower-animal vectors
—for perpetuation of animal viruses, **33**:404
Lower fungi
—sporulation and production of antibiotics, exoenzymes, and exotoxins, **33**:48
Lung
—elimination of bacteria from **30**:514
Lymphoid cells
—reaction to homologous tissue, **30**:397
Lymphoid tissue
—in viral infections, **28**:30
Lysates
—sterilization and preservation of, **27**:253
Lysogenization
—gene transfer, **34**:40
Lysosomes
—as affected by viral development, **33**:390
Lysozyme
—effect on cell walls, **27**:18

Macrophage in tuberculosis
—activation and proliferation, **32**:85
Macrophage inhibition
—of bacillus growth, **29**:466
Macrophages
—in virus infections, **28**:30
—interaction with *M. tuberculosis*, **27**:391
Magnesium (++)
—effect on cell killing by phage and ghosts, **34**:344
Malic dehydrogenase
—multiple forms of, **27**:155
Malignant hemopoietic diseases, **28**:490
Mammalian
—deoxyribonucleic acid, **31**:215
Man
—as a host for perpetuating viruses, **33**:404
Mannose
—compounds containing in *S. griseus*, **34**:1

XUM

Mannosidostreptomycinase
—(α-D-mannosidase) biochemistry and regulation of formation, **34**:1
Mannosidostreptomycinase (streptomyces α-D-mannosidase)
—properties of the enzyme, **34**:1
—regulation of α-D-mannosidase biosynthesis, **34**:1
Map, genetic
—of *E. coli*, **31**:332; **34**:155
—of *S. typhimurium*, **31**:354; **34**:176
Marcescins, **29**:24
Marine bacteria
—specificity of, **29**:9
Maternal-fetal blood group
—incompatability, **30**:427
Mathematical analysis
—of dialysis culture systems, **33**:1
Mating in *Hansenula wingei*,
—molecular basis, **32**:139
Maus-Elberfeld virus
—reproduction, **27**:1
—structure, **27**:1
Measles immunization, **28**:440
Measles virus
—multiplication in cell cultures, **30**:152
Megacins, **29**:24
Membrane of bacteria, **32**:39
Membranes
—self-assembly of, **33**:302
Mengovirus ribonucleic acid
—replication of, **30**:288
Meningitis
—bacterial, **29**:222
Messenger ribonucleic acid
—relation to ribosomes, **33**:445
Metabolic pathways
—enzymatic regulation of, **27**:170
Metabolism
—end-product regulation of, **27**:170
—of bases and nucleosides, **34**:278
—of cells, use of bacteriolytic enzymes, **32**:425
—of pyrimidine in microorganisms, **34**:278
—of thymine and thymidine, **34**:278
Metabolism, fatty acid
—effect of glyoxylate, **32**:1
Metabolites
—leakage during phage and ghost infection, **34**:344
Metallic ions
—role in host-parasite interactions, **30**:136
Micellar structure
—in cell walls, **27**:352
Microbacterium flavum
—as a candidate for the genus *Corynebacterium*, **34**:378
Microbacterium thermosphactum
—as a candidate for the genus *Corynebacterium*, **34**:378
Microbial agents
—histamine-sensitizing factors, **32**:103
Microbial insecticides, **29**:364, 373, 382, 388, 397
Microbial pathogenicity
—biochemical challenge, **32**:164
Microbial systems
—effect of hydrostatic pressure on, **28**:14
Microbiological dissonance, **29**:269
Microbiologist and his times
—an essay, **32**:401
Microbiology
—international aspects of information in, **29**:506
—national science and, **31**:3
—prospects for, **27**:243
—voices of, past, present, and future, **33**:383
Micrococcus lysodeikticus
—action of lysozyme on walls of, **27**:18
Microorganisms
—action on macrophages, **28**:30
—dialysis culture of, **33**:1
—effect on food supply, **29**:251
—promotion of growth by mycobactins, **34**:99
—structure and immunological properties of, **27**:325, 341, 352, 369, 381
Microtubules
—self-assembly of, **33**:302
Milk-borne viruses, **28**:490
Milky disease of Japanese beetle, **29**:373
Millipedes
—caulobacters from, **28**:231
Mineral formation
—by bacterial fermentation, **29**:425
Molecular physiology
—of filamentous bacterial viruses, **33**:172
Molecular sieving, **27**:117
Monocins, **29**:24
—structure of, **31**:230
Monocyte-producing properties
—of *L. monocytogenes*, **30**:309
Mononucleosis
—infectious, enzymatic test for, **27**:191
Moraxella
—in major bacterial grouping, **34**:40
Morphogenesis
—atmospheric control of, **27**:293
—genetic regulation, **33**:505
Morphological response
—to ionic environment, **28**:296
Morphology
—of bacteriophages, **31**:230
—of *L. monocytogenes*, **30**:309
—of the corynebacterial cell, **34**:378
Motility (cellular)
—genetics and chemistry of bacterial flagella, **33**:454
Mucopeptide
—chemistry of walls of bacteria, **34**:194
—in walls of gram-positive organisms, **27**:18

Mucor rouxii
—mold-yeast dimorphism of, **27**:293
Multiple drug resistance, **27**:87
Muramic acid
—biosynthesis of, **27**:18
Murine toxin
—of *P. pestis*, **30**:177
Mutagenic treatments
—of *Streptomyces coelicolor*, **31**:373
Mutants
—affecting recombination, **33**:419
—auxotrophic, transformation of, **27**:228
—enzyme synthesis in, **27**:182
—of *S. coelicolor*, **31**:373
—with modified synthetases, **30**:701
Mycobacteria
—host-reactive properties, **27**:341
Mycobacterium
—in the *CMN* group, **34**:378
—mycobactins in taxonomy, **34**:99
—polyphosphate utilization, **30**:772
Mycobacterium paratuberculosis
—growth in presence of different mycobactins, **34**:99
Mycobacterium tuberculosis
—interaction of macrophages with, **27**:391
Mycobactins
—and growth of *M. paratuberculosis*, **34**:99
—and growth of microorganisms, **34**:99
—as mixtures of homologous compounds, **34**:99
—biochemical function, **34**:99
—biosynthesis, **34**:99
—chemical structure and differences, **34**:99
—conditions for production, **34**:99
—discovery and early history, **34**:99
—extraction methods, **34**:99
—influence of iron deficiency, **34**:99
—in the taxonomy of mycobacteria, **34**:99
—metal complexes, **34**:99
—NMR spectra, **34**:99
—physical and chemical properties, **34**:99
—purification procedures, **34**:99
—relationship to water-soluble sideramines, **34**:99
Mycoplasma
—physiology of, **28**:97
—species of man, **29**:185
Mycotic disease
—ecology of agents of, **31**:6
—epidemiology of, **31**:25
Mycotic disease
—induced immunity to, **31**:35
Myo-inositol
—conversion to 2-keto-inositol, **34**:1
—from glucose, **34**:1
Myxoviruses, **29**:1
—effect of blood group substances, **30**:427
—identification, **29**:496
N-methyl-L-glucosamine moiety
—biosynthesis, **34**:1
National Referral Center for Science and Technology, **29**:544
Natural populations
—of thermophilic blue-green algae, **33**:476
Neisseria
—in major bacterial grouping, **34**:40
Neisseria gonorrhoeae
—identification, **29**:222
Nematode-trapping fungi
—characteristics of, **27**:282
Nematodes
—fungal parasites, **29**:382
Nemin
—analysis, **27**:282
Neonatal disease of calves
—*E. coli* in, **29**:75
Neoplastic tissues
—selective virus sensitivity, **28**:382
Newcastle disease virus
—interferon induction by, **31**:145
—reproduction, **27**:1
—structure of, **27**:1
Nitrate reductase
—and corynebacteria, **34**:378
Nitrogen dioxide
—effect on resistance to respiratory infection, **30**:604
Nitrogen fixation
—biological, history of, **27**:405
—by *Rhizobium*, **27**:228
—ferrodoxin requirements, **28**:497
—nonsymbiotic, **29**:251
Nitrogen metabolism
—of *Mycoplasma*, **28**:97
—of sulfate-reducing bacteria, **29**:425
Nocardia
—in the *CMN* group, **34**:378
Nomenclature
—genetic, **31**:332, 354
Novobiocin
—inhibition of cell-wall synthesis by, **27**:18
Nucleic acid
—from lactic dehydrogenase virus, **29**:143
—of human papova virus, **31**:111
—types of viruses, **29**:477
Nucleic acid metabolism
—effect of pressure, **28**:14
Nucleic acid pairing
—genetic relationship, **34**:40
Nucleic acids
—foreign, entrance into bacterial cells, **32**:291
—of bacteriophages, **31**:230
—of mycoplasmas, **29**:185
—role in anamnestic antibody response, **30**:418
—viral, **30**:267, 279, 288
Nucleoids
—fine structure, **29**:277

XUM

Nucleotide composition analyses
—of fungi, **34**:126
Nucleotide kinase activity
—effect of oligonucleotides on, **31**:83
Nucleotides
—arrangement in deoxyribonucleic acid, **31**:215
—interconversions, **34**:278
Nucleosides
—metabolism, **34**:278
Nucleus of bacteria, **32**:39
Numerical taxonomy, **30**:257
Nutrition
—of group D streptococci, **28**:330
—of *Mycoplasma*, **28**:97
—of sulfate-reducing bacteria, **29**:425

O antigens
—immunochemistry of, **30**:192
O-phosphorylstreptidine
—salvage synthesis, **34**:1
—transamidination, **34**:1
Oil wells
—sulfate-reducing bacteria, **29**:425
Oligonucleotides
—biodynamic effects of, **31**:83
Oömycetes
—DNA base composition, **34**:126
Oxamycin
—inhibition of cell-wall synthesis, **27**:18
Oxidation
—of glycols, by acetic acid bacteria, **28**:164
—of reduced ferredoxin, **28**:497
Oxidative pentose pathway
—regulation, **34**:20
Oxygenases
—crystalline, of pseudomonads, **30**:720

Packet-forming cocci
—taxonomy, **34**:82
Park nucleotides
—formation, **27**:18
Papova virus group, **31**:111
Papovaviruses, **29**:1
Parainfluenza virus type 4
—identification, **29**:496
Parainfluenza virus type 5
—isolation from man, **29**:477
Pasteurella
—in major bacterial grouping, **34**:40
Pasteurella pestis
—detection, **29**:222
—murine toxin of, **30**:177
Pasteurella tularensis, **30**:539
Pediatric viral respiratory illness, **28**:431
Penicillin
—inhibition of cell-wall synthesis by, **27**:18
Penicillinacylase
—properties, **30**:769
Penicillium
—phytotoxin production by, **28**:181
Peptide chain elongation
—in protein biosynthesis, **33**:264
Peptide chain initiation
—in protein biosynthesis, **33**:264
Peptide chain termination
—in protein biosynthesis, **33**:264
Peptides
—effect on vascular permeability, **27**:117
Peptococcus
—in major bacterial grouping, **34**:40
Periodate
—effect on red cells, **27**:191
Periodical publications
—patterns, **29**:523
Peroxide
—oxidation, **30**:94
Perpetuation
—of animal viruses in nature, **33**:404
Pesticins, **29**:24
*p*H
—effect on growth of sarcinae, **34**:82
Phage
—of *Listeria monocytogenes*, **30**:309
Phage conversion
—of *Salmonella*, **30**:192
Phage SPO2
—biological properties, **32**:349
Phagocytes
—mononuclear, from animals, **27**:391
Phagocytic activity
—in stimulated vascular endothelium, **27**:117
Pharmacological data
—retrieval, **29**:560
Phenethyl alcohol
—effect on chromosome replication, **30**:3
Phenetic relationship
—in taxonomy, **34**:40
Phosphatase
—alkaline, in *Escherichia coli*, **27**:155
Phosphatides
—bacterial, **31**:54
Phospholipid
—of poxviruses, **30**:33
Photobacterium
—in major bacterial grouping, **34**:40
Photochemical reaction
—of bacterial photosynthesis, **32**:243
Phycomyces
—comprehensive review of, **33**:99
Phycotoxins
—mode of action of, **31**:180
Phylogenetic relationship
—in taxonomy, **34**:40
Physiology of infection
—of filamentous bacterial viruses, **33**:172
Physiology of L organisms, **28**:97

Physiology of *Mycoplasma*, **28**:97
Phytotoxic substances
—from soil microorganisms, **28**:181
Phytovirology
—international information center, **29**:516
Picornaviruses, **29**:1
—subclassification, **29**:173
Pigeons
—infection by Venezuelan equine encephalitis virus, **30**:589
Pili
—self-assembly of, **33**:302
Plague
—effect of blood group substances, **30**:427
Plague murine toxin
—classification of, **31**:95
—synthesis, **30**:177
Plant losses
—caused by microorganisms, **29**:251
Plant pathogenic corynebacteria
—place among true corynebacteria, **34**:378
Plants
—effect of toxins from microorganisms, **28**:81
—phytotoxic substances in, **28**:181
Plasmalemmosomes, **29**:277
Plasmid transfer
—by conjugation; gene transfer, **34**:40
Plasmids
—nature and role, **33**:210
Pleuropneumonia-like organisms, **29**:185
—physiology, **28**:97
Pneumocins, **29**:24
Pneumococci
—effects of orthophosphate on, **31**:83
Pneumonia, mycoplasmas, **29**:185
Poliomyelitis
—effect of blood group, **30**:427
Poliomyelitis virus
—synthesis, **27**:381
Poliovirus
—host species specificity, **28**:3
Polioviruses
—classification, **29**:173
Poly-β-hydroxybutyrate
—substrate for endogenous metabolism, **28**:126
Polymerase activities
—associated with ribonucleic acid values, **30**:279
Polyphosphates
—inorganic, **30**:772
—long-chain inorganic, and corynebacteria, **34**:378
Polyribosomes
—from fragile cells, **33**:445
Polysaccharide-protein complexes
—from yeast cell walls, **27**:305
Polysaccharides
—adsorption by erythrocytes, **27**:191
—in walls of gram-positive bacteria, **27**:18
—sugar constituents, **30**:192
Populations
—of corynebacteria, **34**:378
Porphyrin
—and corynebacteria, **34**:1
Poxvirus research
—recent progress, **32**:127
Poxviruses, **29**:1
—infection cycle, **30**:33
Pressure chamber
—for disrupting frozen cells, **28**:14
Primate tissues
—latent virus infections, **32**:185
Product formation
—in dialysis culture, **33**:1
Progress in poxvirus research, **32**:127
Propionibacterium
—*C. acnes*, *C. parvum* —place among true corynebacteria, **34**:378
Protective antigen
—in *Bordetella pertussis*, **27**:325
Protein
—as an endogenous substrate, **28**:126
—from yeast cell walls, **27**:305
—transport, **27**:117
Protein requirements
—of mycoplasmas, **29**:185
Protein sequences
—genetic relationships, **34**:40
Protein synthesis
—after amino acid starvation, **30**:3
—during poliovirus infection, **28**:3
—inhibitors, **32**:493
Protein synthesis
—mechanism of, **33**:264
—regulatory connection to ribonucleic acid synthesis, **32**:206
—role in ribosome cycle, **33**:445
—role in viral RNA degradation, **33**:390
Protein-synthesizing machinery
—of thermophilic bacteria, **32**:27
Proteins
—adsorption by erythrocytes, **27**:191
—effect of legume inoculation on, **29**:251
—in walls of gram-positive bacteria, **27**:18
—of poxviruses, **30**:33
Proteins, ribosomal
—biosynthesis, **34**:228
—chemical characterization, **34**:228
Protozoa
—in insects, **29**:397
Prymnesium parvum
—toxins of, **31**:180
Pseudomonadales
—phosphatides of, **31**:54
Pseudomonads
—crystalline oxygenases, **30**:720
Pseudomonas
—availability of mutants, **33**:419

XUM

—bacteriophages, **31:**230
—differences from other bacteria, **33:**419
—features of genetic interest, **33:**419
—flagellation, **29:**442
—genetics of, **33:**419
—in major bacterial grouping, **34:**40
Pseudomonas aeruginosa
—as insect pathogen, **29:**364
Psittacosis-lymphogranuloma organisms
—relationship to bacteria, **27:**18
Publication trends in microbiology, **29:**534
Pullularia pullulans
—lipids from, **31:**194
Pulmonary mycoses
—fungi causing, **31:**6, 25, 35
Purines
—oxidation, **30:**94
Pyocins, **29:**24
—structure of, **31:**230
Pyridine nucleotide reduction
—ferredoxin-linked, **28:**497
Pyrimidine
—analogues, general principles, **34:**278
—biosynthesis, role of carbamyl phosphate synthetase, **34:**278
—metabolism, a review, **34:**278
—metabolism in microorganisms, **34:**278
—metabolism, regulation, **34:**278
—nucleotides, de novo synthesis, **34:**278
—pathway, commonality for all organisms, **34:**278

R antigens,
—immunochemistry, **30:**192
R factors
—in *Enterobacteriaceae*, **32:**55
—origin, **27:**87
Rabbits,
—tuberculosis, **29:**466
Rabies virus
—identification by immunofluorescence, **28:**397, 402
Rashes
—in virus diseases, **30:**739
Receptor pigment
—of phycomyces, **33:**99
Recombination
—bacterial mutants affecting, **33:**419
Reduced diphosphopyridine nucleotide
—control of enzymes, **34:**20
—regulation of the citric acid cycle, **34:**20
Regulation
—of pyrimidine metabolism, **34:**278
Relapsing fever
—borreliae, **29:**46
Relative humidity
—effect on airborne bacteria, **30:**597
Reoviruses, **29:**1
—concentration and purification, **28:**391
Replicase activity
—at optimal and supraoptimal temperatures, **33:**390
Replication
—of bacteria, **29:**277, 299, 326, 345
—of bacterial plasmids, **33:**210
Replication of deoxyribonucleic acid
—dependence of transformation, **32:**29
Resistance transfer factors
—origin, **27:**87
Resistant virus
—for perpetuation of animal viruses, **33:**404
Respiratory antibody
—to *Francisella tularensis*, **30:**539
Respiratory disease
—caused by *Mycoplasma pneumoniae*, **29:**185
Respiratory disease agents
—air sampling, **30:**559, 571
Respiratory illness
—pediatric, **28:**431
—rhinoviruses, **28:**409
—viral, host factors, **28:**423
Respiratory infection
—effect of nitrogen dioxide, **30:**604
Respiratory mycotic disease agents, **31:**6, 25, 35
Respiratory syncytial virus
—identification, **29:**496
Respiratory system
—antibacterial action, **30:**488
Respiratory tract, upper
—effect on airborne disease, **30:**498
Respiratory viruses, **29:**173
—discovery 28:423
Respirolyticvirus
—discovery, **28:**431
Retrieval
—from keyword-indexed reference pool, **29:**577
—of clinical laboratory data, **29:**554
—of pharmacological data, **29:**560
Rheumatic fever
—effect of blood group, **30:**427
Rheumatoid factors
—reactions involving, **31:**157
Rhinoviruses
—chemical characteristics, **28:**409
—definition, **29:**173
—isolation and growth, **28:**409
—physical characteristics, **28:**409
—respiratory disease from, **30:**517
—flagellation, **29:**442
—genetic transformation, **27:**228
—in major bacterial grouping, **34:**40
—symbiosis with plants, **27:**228
Rhodotorula
—lipids, **31:**194
Ribonuclease
—origin during viral infection, **33:**390
Ribonucleic acid
—endogenous use, **28:**126
—from animal cells, **32:**262
—ribosomal, primary structure, **34:**228
—viral, biosynthesis, **30:**267, 269

ribonucleic acid control locus
—in *Escherichia coli*, **32:**206
Ribonucleic acid, ribosomal
—biosynthesis, **34:**228
Ribonucleic acid synthesis
—effect of poliovirus infection on, **28:**3
—regulation, **32:**206
Ribonucleic acid viruses, **29:**1
Ribosomal components
—chemical modification, **34:**228
—fine structure, **34:**228
Ribosomal function, **32:**493
Ribosomal proteins
—biosynthesis, **34:**228
—chemical characterization, **34:**228
Ribosomal ribonucleic acid
—biosynthesis, **34:**228
—primary structure, **34:**228
Ribosome cycle
—antibiotic blocks, **33:**445
—details, **33:**445
—subunit exchange, **34:**228
Ribosomes
—a review of progress, **34:**228
—assembly process, **34:**228
—biosynthesis, **34:**228
—chemical modification, **34:**228
—current ideas, **33:**445
—fine structure, **34:**228
—genetics, **34:**228
—gross function, **34:**228
—molecular components, **34:**228
—mutations, **34:**228
—reconstitution, **34:**228
—role in protein biosynthesis, **33:**264
—self-assembly of, **33:**302
—the twoness of, **33:**445
Rickettsia rickettsii
—aerosol infection with, **30:**636
Rickettsiae
—relationship to bacteria, **27:**18
Rickettsial rashes, **30:**739
Rubella
—fluorescent-antibody diagnosis, **28:**402
Rubella-like disease, **28:**452
Rubella virus, **28:**444, 452
Ruminants
—listeric infection in, **30:**309

Salicylate
—inhibition of immune response, **30:**408
Salmonella
—antigens, **30:**192
—bacteriophages, **31:**230
—in mice, **27:**391
Salmonella typhimurium
—linkage map, **31:**354; **34:**176
—resistance to, **27:**391
Salmonella typhosa
—identification, **29:**222
Salt concentration
—association of bacterial properties, **28:**296
Salt tolerance
—of marine bacteria, **29:**9
—of sulfate-reducing bacteria, **29:**425
Salvage synthesis
—of *O*-phosphorylstreptidine, **34:**1
Sarcina maxima
—carbohydrate metabolism, **34:**82
Sarcina ureae
—ultrastructure of spores and vegetative cells, **33:** 346
Sarcina ventriculi
—glucose fermentation, **34:**82
—synthesis of cellulose, **34:**82
Sarcinae
—effect of acid *p*H, **34:**82
—physiology, **34:**82
—sugar-fermenting; biology, **34:**82
Schizophyllum commune
—cytodifferentiation and morphogenesis, **33:**505
Scientific journal
—300th anniversary, **28:**211
Seawater
—caulobacters from, **28:**231
—survival of organisms, **29:**9
Secretory immunoglobulin A
—cellular localization, **33:**159
—gross molecular form, **33:**159
Sectioning of cells, **29:**277
Self-assembly
—of biological structures, **33:**302
Sensory physiology
—of phycomyces, **33:**99
Septobasidium
—infection of insects, **29:**382
Serological activities
—of immunoglobulins, **31:**157
Serotonin
—effect on vascular permeability, **27:**117
Serratia
—bacteriophages, **31:**230
—as insect pathogen, **29:**364
Sewage sludge
—Sulfate-reducing fermentation, **29:**425
Sex factors
—replication, **29:**161
Sexual agglutination
—in *H. wingei*, **32:**139
Shigella
—grouping, **29:**222
Shigellae
—drug resistant, **27:**87
Short cycle
—for perpetuation of animal viruses, **33:**404

XUM

Sideramines
—and bacterial iron uptake, **34:**99
—biochemical function, **34:**99
—relationship of mycobactins, **34:**99
Sideromycins
—and biochemical function of sideramines, **34:**99
Silicic acid
—hemolytic activity, **27:**191
Simian viruses, **32:**185
—filtration, **29:**477
Simpler viruses
—structure and assembly, **33:**302
Skin reactions
—to mycobacteria, **27:**341
Slime mold
—metabolism, **27:**273
Smallpox
—effect of blood group substances, **30:**427
—fluorescent-antibody diagnosis, **28:**397, 402
Sodium chloride
—bacterial response, **28:**296
Soil
—caulobacters from, **28:**231
Soil management
—by legume inoculation, **29:**251
Soil microorganisms
—phytotoxic substances **28:**181
Soils
—sulfate-reducing bacteria, **29:**425
Soluble antigens
—of viruses, **27:**381
Species specificity
—of enteroviruses, **28:**382
Spherical viruses
—structure and assembly, **33:**302
Spheroplast toxin content
—effect of analogues, **30:**177
Sphingosines
—from *H. ciferri*, **31:**194
Sporeforming bacterial pathogens, **29:**364
Sporeforming sulfate-reducing bacteria, **29:**359
Spores
—aflatoxin production, **30:**795
—comparative ultrastructure, **33:**346
Sporotrichum
—nitrition, **29:**406
Sporulation
—relationship to production of antibiotics, exoenzymes, and exotoxins, **33:**48
Sporulation mutants
—in eubacteria, **33:**48
—in general and applied microbiology, **33:**48
Staining
—of bacterial flagella, **29:**442
Staphylococcal infection
—airborne, **30:**660, 674
Staphylococcal leucocidin, **31:**95
Staphylococci
—bacteriophage typing, **27:**253
—coagulase-positive, phage types, **27:**56
Staphylococcins, **29:**24
Staphylococcus
—in major bacterial grouping, **34:**40
Staphylococcus aureus
—extrachromosomal elements, **33:**210
—healthy carriage, **27:**56
Staphylococcus bacteriophages, **31:**230
Starvation
—effect on survival of microorganisms, **28:**126
Statistical analysis
—of laboratory data, **29:**554
Statolon
—interferon induction with, **31:**132, 138
Streptidine
—from 1-keto-myo-inositol, **34:**1
Streptidine moiety
—biosynthesis, **34:**1
Streptococcal cell walls
—composition, **27:**369
Streptococcal variants, **27:**369
Streptococci
—group A, identification, **29:**222
—group D, **28:**330
Streptococcus bacteriophages, **31:**230
Streptomyces α-D-mannosidase (mannosidostreptomycinase)
—properties of the enzyme, **34:**1
—regulation of α-D-mannosidase biosynthesis, **34:**1
Streptomyces coelicolor
—genetic analysis, **31:**373
Streptomyces griseus
—and biosynthesis of streptomycin, **34:**1
—mannose-containing compounds, **34:**1
Streptomycin
—biochemistry and regulation of formation, **34:**1
—biosynthesis, **34:**1
—fermentation, **34:**1
Streptomycin
—transformation of resistance, **27:**228
Streptomycin synthesis
—regulatory mechanisms, **34:**1
Streptose moiety
—biosynthesis, **34:**1
Succinate
—effect on chromosome replication, **30:**3
Sugar-fermenting sarcinae
—biology, **34:**82
Sulfate-reducing bacteria, **29:**359, 425
—classification of, **30:**732
—flagellation, **29:**442
Sulfur metabolism
—of sulfate-reducing bacteria, **29:**425
Supraoptimal temperatures
—effect on viral development, **33:**390

Surface-active compounds
—action on erythrocytes, **27:**191
Synthesis
—de novo, of CTP, **34:**278
—de novo, of UTP, **34:**278
Synthetases
—modified, mutants with, **30:**701

Tannic acid
—effect on red cells, **27:**191
Target theory
—of viral inactivation, **28:**150
Taxonomic relationship
—phenetic and phylogenetic, **34:**40
Taxonomy
—conventional, **30:**257
—numerical, **30:**257
—of bacteria, **34:**40
—of glycolipids, **34:**365
—use of flagellation, **29:**442
Taxonomy of mycobactins
—methods of identifying, **34:**99
Teichoic acids
—in cell walls of gram-positive bacteria, **27:**18
Temperature
—responses of thermophilic blue-green algae, **33:**476
Tetanus toxoid
—aerosol vaccination, **30:**624
Tetracycline prophylaxis
—of tularemia, **30:**542
Thermal waters
—distribution of, **33:**476
—solutes of, **33:**476
Thermophilic bacteria
—protein-synthesizing machinery, **32:**27
Thermophilic blue-green algae
—distribution of species, **33:**476
—responses to temperature and light, **33:**476
Thermophilic cyanophytes
—cultivation of, **33:**476
Thiocholine
—hydrolysis by cholinesterase, **30:**94
Thorotrast
—use in study of macrophages in virus disease, **28:**30
Threonine deaminases
—synthesis in *E. coli*, **27:**170
Thymidine
—metabolism, **34:**278
Thymine
—metabolism, **34:**278
Thymine-requiring mutants
—of *E. coli*, **34:**278
Thymine starvation
—effect on chromosome replication, **30:**3
Tick-borne relapsing fever, **29:**46
Tissue cultures
—mycoplasma contamination, **29:**185

Tobacco mosaic virus
—comparison with animal viruses, **27:**1
Torulopsis apicola
—lipids of, **31:**194
tox gene
—distribution among cornybacteriophages, product, and expression, **34:**378
Toxic principle
—for explanation of endotoxicity, **33:**72
Toxin, murine
—of *P. pestis*, **30:**177
Toxins
—algal, mode of action, **31:**180
—bacterial, nomenclature, **31:**95
Toxins, aflatoxins, **30:**460, 471
Toxoids
—nomenclature, **31:**95
Transamidination
—of *O*-phosphorylstreptamine, **34:**1
Transduction
—gene transfer, **34:**40
—in *Bacillus cereus* and *B. anthracis*, **32:**358
Transfection
—in *B. subtilis*, **32:**313
Transfer
—of viral DNA, **32:**227
Transfer ribonucleic acid
—role in protein biosynthesis, **33:**264
Transformation
—gene transfer, **34:**40
—genetic, of *Rhizobium*, **27:**228
—in *B. subtilis*, **32:**313
—role of recipient cell DNA, **32:**291
Translation
—mechanism in protein biosynthesis, **33:**264
Transport
—effect of phage and ghosts, **34:**344
Treponema pallidum
—detection, **29:**222
Trichoderma
—phytotoxin production, **28:**181
Tubercle bacilli
—immunity, **27:**341
Tuberculosis
—cellular hypersensitivity and immunity, **32:**85
—macrophage activation and proliferation, **32:**85
—resistance, **29:**466
Tularemia
—antibiotic prophylaxis, **30:**542
Tularemia vaccine
—live, **30:**532
Tumor cells
—effect of oligonucleotides, **31:**83
Tumors
—relationship to viruses, **29:**143
Typhoid
—immunity, **27:**391

XUM

Ultracentrifugation
—in virus isolation, **28:**391
Ultrafiltration
—for grouping viruses, **29:**477
Ultrasound
—use in bacterial transformation, **27:**228
Ultrastructural anatomy
—of the corynebacterial cell, **34:**378
Ultrastructure
—of bacteriophages, **31:**230
Unde et quo
—ASM Presidential Address, 1970, **34:**217
Uridine-5′-monophosphate
—de novo synthesis, **34:**278
Uridine nucleotides
—in gram-negative bacteria, **27:**18
Ustilago
—lipids from, **31:**194

Vaccination
—with tetanus toxoid by aerosol, **30:**624
Vaccine therapy
—for human papova virus, **31:**111
Vaccines
—El Tor, **28:**72
—for measles, **28:**440
—for rhinovirus illness, **28:**409
—killed, immunization of mice, **27:**391
—tularemia, **30:**532
—viral, new, **28:**493
Vancomycin
—inhibition of cell-wall synthesis, **27:**18
Vascular permeability
—effect of inflammation, **27:**117
Vegetative cells
—comparative ultrastructure of, **33:**346
Venules
—ultrastructure, **27:**117
Venezuelan equine encephalitis virus, **30:**589
—infections, **31:**65
Vibrio
—in major bacterial grouping, **34:**40
Vibrio-like organisms
—flagellation, **29:**442
Vibrios
—cholera, **28:**72
Viral aerosols, **30:**576
Viral components
—significance, **27:**1
Viral deoxyribonucleic acid, **31:**215
—transfer, **33:**227
Viral development
—effect of supraoptimal temperatures, **33:**390
Viral diseases
—diagnosis, **28:**397
—respiratory, **30:**517
Viral infection
—cellular resistance, **27:**72
—fight of the organism against, **33:**390
—in carrier cells, **32:**387
—latent, in primate tissues, **32:**185
—susceptibility, **28:**30
—Venezuelan equine encephalitis virus, **31:**65
Viral inhibitors
—endogenous to cells, **28:**367
Viral interference
—in mixed infections, **27:**72
Viral nucleic acids
—replication, **30:**267, 279, 288
Viral respiratory diseases, **28:**439
Viral respiratory illness
—host factors, **28:**423
—pediatric, **28:**431
Viral ribonucleic acid synthesis
—at supraoptimal temperatures, **33:**390
Viral vaccines
—new, **28:**493
Viremia
—cell-associated, **28:**30
—plasma, **28:**30
Virion
—of filamentous bacterial viruses, **33:**172
Virus-carcinogen interactions, **28:**480
Virus diseases
—biologicals for control, **28:**493
—pathogenesis, **28:**30
—rashes, **30:**739
Virus-host cell interactions, **30:**136
Virus receptors
—action of enzymes, **27:**191
Virus-sensitive cells
—derivation, **28:**382
Virus sensitivity
—of neoplastic tissues, **28:**382
Virus susceptibility
—of human tissues, **28:**3
Virus virulence, **28:**382
—relation to interferon induction, **28:**367
Viruses
—animal, grouping, **29:**477
—animal, immunological properties, **27:**381
—animal, reproduction of, **27:**1
—animal, structure of, **27:**1, 381
—concentration and purification, **28:**391
—food-borne, **28:**490
—fowl plague, **27:**1
—herpes simplex, synthesis, **27:**381
—human papova virus, **31:**111
—in insects, **29:**397
—inactivation kinetics, **28:**150
—index, **29:**516
—influenza, structure, **27:**381
—lactic dehydrogenase, **29:**143
—Maus-Elberfeld, **27:**1
—measles, multiplications in cell cultures, **30:**152
—Newcastle disease, **27:**1

—of blue-green alga, **31:**230
—origin, **29:**1
—poliomyelitis, synthesis, **27:**381
—respiratory, discovery, **28:**423
—review of research progress, **32:**127
—RNA-containing, **27:**1
—Venezuelan equine encephalitis, **30:**589
—yellow fever, attenuation, **30:**615
Viruses, myxoviruses
—effect of blood group substances, **30:**427
Viruses, picornaviruses
—subclassification, **29:**173
Viruses, poxviruses
—infection cycle, **30:**33
Vitamin requirements
—of fungi, **29:**406
—of mycoplasmas, **29:**185
Vitamins
—their control in microorganisms, **32:**465

Wart virus, **31:**111
Water
—sulfate-reducing bacteria in, **29:**425
Water-soluble sideramines
—biochemical function, **34:**99
—relationship of mycobactins, **34:**99
Whence and whither
—ASM Presidential Address, 1970, **34:**217
White cells
—affinity of antigen, **32:**404

Xanthomonas
—in major bacterial grouping, **34:**40

Yeast
—extracellular lipids of, **31:**194
Yeast hexokinase
—forms, **27:**155
Yeastlike organisms
—lipids from, **31:**194
Yeasts
—mechanism of budding, **27:**305
—molecular bases of form in, **27:**305
—pathogenic, nutrition of, **29:**406
—polyphosphate utilization, **30:**772
Yellow fever virus
—attenuation, **30:**615

Zygomycetes
—DNA base composition, **34:**126

INDEX TO DATE OF ISSUE

Month	Date of Issue	Pages
March	16 April 1970	1–98
June	24 July 1970	99–214
September	9 October 1970	215–364
December	23 December 1970	365–422

XUM